

## RCI-21 - Improved Building Codes

### Benefit/Cost of Reducing CO<sub>2</sub>e:

Arizona: 14 MMt between 2007-2020; 1.3% of 2020 emissions; \$-18/ton  
New Mexico: 16.6 MMt between 2007-2020; 2.3% of 2020 emissions; \$-12/ton  
Colorado: High reduction potential; Low cost  
Montana: 1.6 MMt between 2007-2020; 0.7% of 2020 emissions; \$-9/ton  
Oregon: 0.61 MMt between 2007-2025; 0.6% of 2025 emissions; Cost effective  
N. Carolina: 29 MMt between 2007-2020; 1.6% of 2020 emissions; \$-17/ton

**Assessment: High Priority. Bin A. 20 out of 22 votes.**

This option offers significant GHG emissions reduction benefits and cost savings. Improved codes can be readily implemented.

Building codes set the minimum standards to which homes and other buildings must be constructed. Improved building codes could increase building energy efficiency requirements. In addition to setting new standards, training for contractors and others and enforcement of standards is critical.

New Mexico is considering requiring buildings to cut energy use by 50 Percent per sq ft by 2010.

Improved building codes require new buildings to meet minimum energy efficiency requirements and could also be applied to existing buildings undergoing renovations. Codes usually address improvements in “thermal resistance” in the exterior and windows, air leakage, and heating and cooling efficiencies.<sup>31</sup>

The Arizona Climate Change Advisory Group recommended that Arizona adopt a statewide code or strongly encourage municipalities to adopt and maintain improved building codes. The CCAG also recommends that Arizona or the municipalities adopt the 2004 International Energy Conservation Code (IECC), and consider adopting innovative features from California’s latest Title 24 Building Energy Codes, such as lighting efficiency requirements in new homes. In addition, the CCAG recommends that Arizona and local jurisdictions should update energy codes regularly, such as a three-year cycle of review based on the national model codes release.<sup>32</sup>

Arizona is a “home-rule state” meaning that the municipalities are able to adopt and enforce their residential and commercial building energy codes. According to the Southwest Energy Efficiency Project (SWEET), Arizona passed legislation encouraging local governments to voluntarily adopt of the 2000 International Energy Code (IECC) and ASHRAE Standard 90.1-1999. State government buildings must comply with ASHRAE Standard 90.1-1999, the most recent and model standard for energy efficiency in commercial buildings.<sup>33</sup>

In California, Energy Efficiency Standards for Residential and Nonresidential Buildings were established in 1978 in response to a legislative mandate to reduce energy consumption. California

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<sup>31</sup> See [http://www.epa.gov/cleanenergy/pdf/gta/guide\\_action\\_full.pdf](http://www.epa.gov/cleanenergy/pdf/gta/guide_action_full.pdf)

<sup>32</sup> See <http://www.azclimatechange.us/ewebeditpro/items/O40F9347.pdf>

<sup>33</sup> See Southwest Energy Efficiency Project (SWEET)<http://www.swenergy.org/>

Title 24 is updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Currently in the process of being updated, the first phase of the development process will include a series of public workshops. The second phase will present draft language for the 2008 Standards based on the discussions in the first phase and will offer opportunities for further public input. The third phase will be the formal rulemaking. California's building efficiency standards (along with those for energy efficient appliances) have saved more than \$56 billion in electricity and natural gas costs since 1978. It is estimated the standards will save an additional \$23 billion by 2013.<sup>34</sup>

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<sup>34</sup> <http://www.energy.ca.gov/title24/index.html>